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<110> Hastings, Gregg A.  
Ruben, Steven M.

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				245				250						255		
cac	ccc	agc	atc	aag	aat	tcc	atc	aac	ctg	atg	gtg	gta	aaa	gtg	ctg	816
His	Pro	Ser	Ile	Lys	Asn	Ser	Ile	Asn	Leu	Met	Val	Val	Lys	Val	Leu	
			260					265					270			
atc	gta	gaa	gat	gaa	aaa	tgg	ggc	cca	gag	gtg	tcc	gac	aat	ggg	ggg	864
Ile	Val	Glu	Asp	Glu	Lys	Trp	Gly	Pro	Glu	Val	Ser	Asp	Asn	Gly	Gly	
			275				280					285				
ctt	aca	ctg	cgt	aac	ttc	tgc	aac	tgg	cag	cgg	cgt	ttc	aac	cag	ccc	912
Leu	Thr	Leu	Arg	Asn	Phe	Cys	Asn	Trp	Gln	Arg	Arg	Phe	Asn	Gln	Pro	
	290					295					300					
agc	gac	cgc	cac	cca	gag	cac	tac	gac	acg	gcc	atc	ctg	ctc	acc	aga	960
Ser	Asp	Arg	His	Pro	Glu	His	Tyr	Asp	Thr	Ala	Ile	Leu	Leu	Thr	Arg	
	305				310					315					320	
cag	aac	ttc	tgt	ggg	cag	gag	ggg	ctg	tgt	gac	acc	ctg	ggt	gtg	gca	1008
Gln	Asn	Phe	Cys	Gly	Gln	Glu	Gly	Leu	Cys	Asp	Thr	Leu	Gly	Val	Ala	
				325					330					335		

gac atc ggg acc att tgt gac ccc aac aaa agc tgc tcc gtg atc gag	1056
Asp Ile Gly Thr Ile Cys Asp Pro Asn Lys Ser Cys Ser Val Ile Glu	
340 345 350	
gat gag ggg ctc cag gcg gcc cac acc ctg gcc cat gaa cta ggg cac	1104
Asp Glu Gly Leu Gln Ala Ala His Thr Leu Ala His Glu Leu Gly His	
355 360 365	
gtc ctc agc atg ccc cac gac gac tcc aag ccc tgc aca cgg ctc ttc	1152
Val Leu Ser Met Pro His Asp Asp Ser Lys Pro Cys Thr Arg Leu Phe	
370 375 380	
ggg ccc atg ggc aag cac cac gtg atg gca ccg ctg ttc gtc cac ctg	1200
Gly Pro Met Gly Lys His His Val Met Ala Pro Leu Phe Val His Leu	
385 390 395 400	
aac cag acg ctg ccc tgg tcc ccc tgc agc gcc atg tat ctc aca gag	1248
Asn Gln Thr Leu Pro Trp Ser Pro Cys Ser Ala Met Tyr Leu Thr Glu	
405 410 415	
ctt ctg gac ggc ggg cac gga gac tgt ctc ctg gat gcc cct ggt gcg	1296
Leu Leu Asp Gly Gly His Gly Asp Cys Leu Leu Asp Ala Pro Gly Ala	
420 425 430	
gcc ctg ccc ctc ccc aca ggc ctc ccg ggc cgc atg gcc ctg tac cag	1344
Ala Leu Pro Leu Pro Thr Gly Leu Pro Gly Arg Met Ala Leu Tyr Gln	
435 440 445	
ctg gac cag cag tgc agg cag atc ttt ggg ccg gat ttc cgc cac tgc	1392
Leu Asp Gln Gln Cys Arg Gln Ile Phe Gly Pro Asp Phe Arg His Cys	
450 455 460	
ccc aac acc tct gct cag gac gtc tgc gcc cag ctt tgg tgc cac act	1440
Pro Asn Thr Ser Ala Gln Asp Val Cys Ala Gln Leu Trp Cys His Thr	
465 470 475 480	
gat ggg gct gag ccc ctg tgc cac acg aag aat ggc agc ctg ccc tgg	1488
Asp Gly Ala Glu Pro Leu Cys His Thr Lys Asn Gly Ser Leu Pro Trp	
485 490 495	
gct gac ggc acg ccg tgc ggg cct ggg cac ctc tgc tca gaa ggc agc	1536
Ala Asp Gly Thr Pro Cys Gly Pro Gly His Leu Cys Ser Glu Gly Ser	
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tgt cta cct gag gag gaa gtg gag agg ccc aag ccc gtg gta gat gga	1584
Cys Leu Pro Glu Glu Glu Val Glu Arg Pro Lys Pro Val Val Asp Gly	
515 520 525	
ggc tgg gca ccg tgg gga ccc tgg gga gaa tgt tct cgg acc tgt gga	1632
Gly Trp Ala Pro Trp Gly Pro Trp Gly Glu Cys Ser Arg Thr Cys Gly	
530 535 540	
gga gga gta cag ttt tca cac cgt gag tgc aag gac ccc gag cct cag	1680
Gly Gly Val Gln Phe Ser His Arg Glu Cys Lys Asp Pro Glu Pro Gln	
545 550 555 560	
aat gga gga aga tac tgc ctg ggt cgg aga gcc aag tac cag tca tgc	1728
Asn Gly Gly Arg Tyr Cys Leu Gly Arg Arg Ala Lys Tyr Gln Ser Cys	
565 570 575	
cac acg gag gaa tgc ccc cct gac ggg aaa agc ttc agg gag cag cag	1776
His Thr Glu Glu Cys Pro Pro Asp Gly Lys Ser Phe Arg Glu Gln Gln	

580					585					590						
tgt	gag	aag	tat	aat	gcc	tac	aat	tac	act	gac	atg	gac	ggg	aat	ctc	1824
Cys	Glu	Lys	Tyr	Asn	Ala	Tyr	Asn	Tyr	Thr	Asp	Met	Asp	Gly	Asn	Leu	
		595					600					605				
ctg	cag	tgg	gtc	ccc	aag	tat	gct	ggg	gtg	tcc	ccc	cgg	gac	cgc	tgc	1872
Leu	Gln	Trp	Val	Pro	Lys	Tyr	Ala	Gly	Val	Ser	Pro	Arg	Asp	Arg	Cys	
		610					615				620					
aag	ttg	ttc	tgc	cga	gcc	cgg	ggg	agg	agc	gag	ttc	aaa	gtg	ttc	gag	1920
Lys	Leu	Phe	Cys	Arg	Ala	Arg	Gly	Arg	Ser	Glu	Phe	Lys	Val	Phe	Glu	
					630					635					640	
gcc	aag	gtg	att	gat	ggc	acc	ctg	tgt	ggg	cca	gaa	aca	ctg	gcc	atc	1968
Ala	Lys	Val	Ile	Asp	Gly	Thr	Leu	Cys	Gly	Pro	Glu	Thr	Leu	Ala	Ile	
				645					650					655		
tgt	gtc	cgt	ggc	cag	tgt	gtc	aag	gcc	ggc	tgt	gac	cat	gtg	gtg	gac	2016
Cys	Val	Arg	Gly	Gln	Cys	Val	Lys	Ala	Gly	Cys	Asp	His	Val	Val	Asp	
			660					665					670			
tcg	cct	cgg	aag	ctg	gac	aaa	tgc	ggg	gtg	tgt	ggg	ggc	aaa	ggc	aac	2064
Ser	Pro	Arg	Lys	Leu	Asp	Lys	Cys	Gly	Val	Cys	Gly	Gly	Lys	Gly	Asn	
			675				680					685				
tcc	tgc	agg	aag	gtc	tcc	ggg	tcc	ctc	acc	ccc	acc	aat	tat	ggc	tac	2112
Ser	Cys	Arg	Lys	Val	Ser	Gly	Ser	Leu	Thr	Pro	Thr	Asn	Tyr	Gly	Tyr	
			690			695					700					
aat	gac	att	gtc	acc	atc	cca	gct	ggt	gcc	act	aat	att	gac	gtg	aag	2160
Asn	Asp	Ile	Val	Thr	Ile	Pro	Ala	Gly	Ala	Thr	Asn	Ile	Asp	Val	Lys	
					710				715						720	
cag	cgg	agc	cac	ccg	ggt	gtg	cag	aac	gat	ggg	aac	tac	ctg	gcg	ctg	2208
Gln	Arg	Ser	His	Pro	Gly	Val	Gln	Asn	Asp	Gly	Asn	Tyr	Leu	Ala	Leu	
				725					730					735		
aag	acg	gct	gat	ggg	cag	tac	ctg	ctc	aac	ggc	aac	ctg	gcc	atc	tct	2256
Lys	Thr	Ala	Asp	Gly	Gln	Tyr	Leu	Leu	Asn	Gly	Asn	Leu	Ala	Ile	Ser	
			740					745					750			
gcc	ata	gag	cag	gac	atc	ttg	gtg	aag	ggg	acc	atc	ctg	aag	tac	agc	2304
Ala	Ile	Glu	Gln	Asp	Ile	Leu	Val	Lys	Gly	Thr	Ile	Leu	Lys	Tyr	Ser	
		755					760					765				
ggc	tcc	atc	gcc	acc	ctg	gag	cgc	ctg	cag	agc	ttc	cgg	ccc	ttg	cca	2352
Gly	Ser	Ile	Ala	Thr	Leu	Glu	Arg	Leu	Gln	Ser	Phe	Arg	Pro	Leu	Pro	
			770			775					780					
gag	cct	ctg	aca	gtg	cag	ctc	ctg	aca	gtc	cct	ggc	gag	gtc	ttc	ccc	2400
Glu	Pro	Leu	Thr	Val	Gln	Leu	Leu	Thr	Val	Pro	Gly	Glu	Val	Phe	Pro	
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cca	aaa	gtc	aaa	tac	acc	ttc	ttt	gtt	cct	aat	gac	gtg	gac	ttt	agc	2448
Pro	Lys	Val	Lys	Tyr	Thr	Phe	Phe	Val	Pro	Asn	Asp	Val	Asp	Phe	Ser	
				805					810					815		
atg	cag	agc	agc	aaa	gag	aga	gca	acc	acc	aac	atc	atc	cag	ccg	ctg	2496
Met	Gln	Ser	Ser	Lys	Glu	Arg	Ala	Thr	Thr	Asn	Ile	Ile	Gln	Pro	Leu	
				820				825					830			



ctc cac gca cag tgg gtg ctg ggg gac tgg tct gag tgc tct agc acc 2544  
Leu His Ala Gln Trp Val Leu Gly Asp Trp Ser Glu Cys Ser Ser Thr  
835 840 845

tgc ggg gcc ggc tgg cag agg cga act gta gag tgc agg gac ccc tcc 2592  
Cys Gly Ala Gly Trp Gln Arg Arg Thr Val Glu Cys Arg Asp Pro Ser  
850 855 860

ggc cag gcc tct gcc acc tgc aac aag gct ctg aaa ccc gag gat gcc 2640  
Gly Gln Ala Ser Ala Thr Cys Asn Lys Ala Leu Lys Pro Glu Asp Ala  
865 870 875 880

aag ccc tgc gaa agc cag ctg tgc ccc ctg tgattcaggg gggcaggggc 2690  
Lys Pro Cys Glu Ser Gln Leu Cys Pro Leu  
885 890

cagtcttgtg ctcttgga cagcgtactg aggtgcagac aaggtctcca ctgtggtgac 2750

tgggtccctt ggccatatca aggcagcacg gccacccag gcctccatt gccgcaaccc 2810

ctccagtact gcacaaattc ctaaggggga agagaaaagg tatggggcgg caaacctat 2870

catcaactgt ccawtigna ggaacttgct cgggttcaat taaaggcata agttaaagta 2930

aattcattat gatcaacaga cctcacntca tctgttgcan gatacaacta ntaaaaaaaaa 2990

aaaaaaaaa aaaaaaaaa 3008

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<212> PRT

<213> Homo sapiens

<400> 4

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Ala Ala Gly Gly Gln Ala Ser Glu Leu Val Val Pro Thr Arg Leu Pro  
35 40 45

Gly Ser Ala Gly Glu Leu Ala Leu His Leu Ser Ala Phe Gly Lys Gly  
50 55 60

Phe Val Leu Arg Leu Ala Pro Asp Asp Ser Phe Leu Ala Pro Glu Phe  
65 70 75 80

Lys Ile Glu Arg Leu Gly Gly Ser Gly Arg Ala Thr Gly Gly Glu Arg  
85 90 95

Gly Leu Arg Gly Cys Phe Phe Ser Gly Thr Val Asn Gly Glu Pro Glu  
100 105 110

Ser Leu Ala Ala Val Ser Leu Cys Arg Gly Leu Ser Gly Ser Phe Leu  
115 120 125

Leu Asp Gly Glu Glu Phe Thr Ile Gln Pro Gln Gly Ala Gly Gly Ser  
130 135 140

Leu Ala Gln Pro His Arg Leu Gln Arg Trp Gly Pro Ala Gly Ala Arg  
 145 150 155 160  
 Pro Leu Pro Arg Gly Pro Glu Trp Glu Val Glu Thr Gly Glu Gly Gln  
 165 170 175  
 Arg Gln Glu Arg Gly Asp His Gln Glu Asp Ser Glu Glu Glu Ser Gln  
 180 185 190  
 Glu Glu Glu Ala Glu Gly Ala Ser Glu Pro Pro Pro Pro Leu Gly Ala  
 195 200 205  
 Thr Ser Arg Thr Lys Arg Phe Val Ser Glu Ala Arg Phe Val Glu Thr  
 210 215 220  
 Leu Leu Val Ala Asp Ala Ser Met Ala Ala Phe Tyr Gly Ala Asp Leu  
 225 230 235 240  
 Gln Asn His Ile Leu Thr Leu Met Ser Val Ala Ala Arg Ile Tyr Lys  
 245 250 255  
 His Pro Ser Ile Lys Asn Ser Ile Asn Leu Met Val Val Lys Val Leu  
 260 265 270  
 Ile Val Glu Asp Glu Lys Trp Gly Pro Glu Val Ser Asp Asn Gly Gly  
 275 280 285  
 Leu Thr Leu Arg Asn Phe Cys Asn Trp Gln Arg Arg Phe Asn Gln Pro  
 290 295 300  
 Ser Asp Arg His Pro Glu His Tyr Asp Thr Ala Ile Leu Leu Thr Arg  
 305 310 315 320  
 Gln Asn Phe Cys Gly Gln Glu Gly Leu Cys Asp Thr Leu Gly Val Ala  
 325 330 335  
 Asp Ile Gly Thr Ile Cys Asp Pro Asn Lys Ser Cys Ser Val Ile Glu  
 340 345 350  
 Asp Glu Gly Leu Gln Ala Ala His Thr Leu Ala His Glu Leu Gly His  
 355 360 365  
 Val Leu Ser Met Pro His Asp Asp Ser Lys Pro Cys Thr Arg Leu Phe  
 370 375 380  
 Gly Pro Met Gly Lys His His Val Met Ala Pro Leu Phe Val His Leu  
 385 390 395 400  
 Asn Gln Thr Leu Pro Trp Ser Pro Cys Ser Ala Met Tyr Leu Thr Glu  
 405 410 415  
 Leu Leu Asp Gly Gly His Gly Asp Cys Leu Leu Asp Ala Pro Gly Ala  
 420 425 430  
 Ala Leu Pro Leu Pro Thr Gly Leu Pro Gly Arg Met Ala Leu Tyr Gln  
 435 440 445  
 Leu Asp Gln Gln Cys Arg Gln Ile Phe Gly Pro Asp Phe Arg His Cys  
 450 455 460  
 Pro Asn Thr Ser Ala Gln Asp Val Cys Ala Gln Leu Trp Cys His Thr  
 465 470 475 480

Asp	Gly	Ala	Glu	Pro	Leu	Cys	His	Thr	Lys	Asn	Gly	Ser	Leu	Pro	Trp	485	490	495
Ala	Asp	Gly	Thr	Pro	Cys	Gly	Pro	Gly	His	Leu	Cys	Ser	Glu	Gly	Ser	500	505	510
Cys	Leu	Pro	Glu	Glu	Glu	Val	Glu	Arg	Pro	Lys	Pro	Val	Val	Asp	Gly	515	520	525
Gly	Trp	Ala	Pro	Trp	Gly	Pro	Trp	Gly	Glu	Cys	Ser	Arg	Thr	Cys	Gly	530	535	540
Gly	Gly	Val	Gln	Phe	Ser	His	Arg	Glu	Cys	Lys	Asp	Pro	Glu	Pro	Gln	545	550	555
Asn	Gly	Gly	Arg	Tyr	Cys	Leu	Gly	Arg	Arg	Ala	Lys	Tyr	Gln	Ser	Cys	565	570	575
His	Thr	Glu	Glu	Cys	Pro	Pro	Asp	Gly	Lys	Ser	Phe	Arg	Glu	Gln	Gln	580	585	590
Cys	Glu	Lys	Tyr	Asn	Ala	Tyr	Asn	Tyr	Thr	Asp	Met	Asp	Gly	Asn	Leu	595	600	605
Leu	Gln	Trp	Val	Pro	Lys	Tyr	Ala	Gly	Val	Ser	Pro	Arg	Asp	Arg	Cys	610	615	620
Lys	Leu	Phe	Cys	Arg	Ala	Arg	Gly	Arg	Ser	Glu	Phe	Lys	Val	Phe	Glu	625	630	635
Ala	Lys	Val	Ile	Asp	Gly	Thr	Leu	Cys	Gly	Pro	Glu	Thr	Leu	Ala	Ile	645	650	655
Cys	Val	Arg	Gly	Gln	Cys	Val	Lys	Ala	Gly	Cys	Asp	His	Val	Val	Asp	660	665	670
Ser	Pro	Arg	Lys	Leu	Asp	Lys	Cys	Gly	Val	Cys	Gly	Gly	Lys	Gly	Asn	675	680	685
Ser	Cys	Arg	Lys	Val	Ser	Gly	Ser	Leu	Thr	Pro	Thr	Asn	Tyr	Gly	Tyr	690	695	700
Asn	Asp	Ile	Val	Thr	Ile	Pro	Ala	Gly	Ala	Thr	Asn	Ile	Asp	Val	Lys	705	710	715
Gln	Arg	Ser	His	Pro	Gly	Val	Gln	Asn	Asp	Gly	Asn	Tyr	Leu	Ala	Leu	725	730	735
Lys	Thr	Ala	Asp	Gly	Gln	Tyr	Leu	Leu	Asn	Gly	Asn	Leu	Ala	Ile	Ser	740	745	750
Ala	Ile	Glu	Gln	Asp	Ile	Leu	Val	Lys	Gly	Thr	Ile	Leu	Lys	Tyr	Ser	755	760	765
Gly	Ser	Ile	Ala	Thr	Leu	Glu	Arg	Leu	Gln	Ser	Phe	Arg	Pro	Leu	Pro	770	775	780
Glu	Pro	Leu	Thr	Val	Gln	Leu	Leu	Thr	Val	Pro	Gly	Glu	Val	Phe	Pro	785	790	795
Pro	Lys	Val	Lys	Tyr	Thr	Phe	Phe	Val	Pro	Asn	Asp	Val	Asp	Phe	Ser	805	810	815

Met Gln Ser Ser Lys Glu Arg Ala Thr Thr Asn Ile Ile Gln Pro Leu  
820 825 830

Leu His Ala Gln Trp Val Leu Gly Asp Trp Ser Glu Cys Ser Ser Thr  
835 840 845

Cys Gly Ala Gly Trp Gln Arg Arg Thr Val Glu Cys Arg Asp Pro Ser  
850 855 860

Gly Gln Ala Ser Ala Thr Cys Asn Lys Ala Leu Lys Pro Glu Asp Ala  
865 870 875 880

Lys Pro Cys Glu Ser Gln Leu Cys Pro Leu  
885 890

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<400> 5  
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Ala Ala Ala Asp Pro Pro Gly Gly Pro Gln Gly His Gly Ala Glu Arg  
35 40 45

Ile Leu Ala Val Pro Val Arg Thr Asp Ala Gln Gly Arg Leu Val Ser  
50 55 60

His Val Val Ser Ala Ala Thr Ala Pro Ala Gly Val Arg Thr Arg Arg  
65 70 75 80

Ala Ala Pro Ala Gln Ile Pro Gly Leu Ser Gly Gly Ser Glu Glu Asp  
85 90 95

Pro Gly Gly Arg Leu Phe Tyr Asn Val Thr Val Phe Gly Arg Asp Leu  
100 105 110

His Leu Arg Leu Arg Pro Asn Ala Arg Leu Val Ala Pro Gly Ala Thr  
115 120 125

Val Glu Trp Gln Gly Glu Ser Gly Ala Thr Arg Val Glu Pro Leu Leu  
130 135 140

Gly Thr Cys Leu Tyr Val Gly Asp Val Ala Gly Leu Ala Glu Ser Ser  
145 150 155 160

Ser Val Ala Leu Ser Asn Cys Asp Gly Leu Ala Gly Leu Ile Arg Met  
165 170 175

Glu Glu Glu Glu Phe Phe Ile Glu Pro Leu Glu Lys Gly Leu Ala Ala  
180 185 190

Lys Glu Ala Glu Gln Gly Arg Val His Val Val Tyr His Arg Pro Thr  
195 200 205

Thr	Ser	Arg	Pro	Pro	Pro	Leu	Gly	Gln	Ala	Leu	Asp	Thr	Gly	Ile	Ser
Ala	Asp	Ser	Leu	Asp	Ser	Leu	Ser	Arg	Ala	Leu	Gly	Val	Leu	Glu	Glu
Arg	Val	Asn	Ser	Ser	Arg	Arg	Arg	Met	Arg	Arg	His	Ala	Ala	Asp	Asp
Asp	Tyr	Asn	Ile	Glu	Val	Leu	Leu	Gly	Val	Asp	Asp	Ser	Val	Val	Gln
Phe	His	Gly	Thr	Glu	His	Val	Gln	Lys	Tyr	Leu	Leu	Thr	Leu	Met	Asn
Ile	Val	Asn	Glu	Ile	Tyr	His	Asp	Glu	Ser	Leu	Gly	Ala	His	Ile	Asn
Val	Val	Leu	Val	Arg	Ile	Ile	Leu	Leu	Ser	Tyr	Gly	Lys	Ser	Met	Ser
Leu	Ile	Glu	Ile	Gly	Asn	Pro	Ser	Gln	Ser	Leu	Glu	Asn	Val	Cys	Arg
Trp	Ala	Tyr	Leu	Gln	Gln	Lys	Pro	Asp	Thr	Asp	His	Asp	Glu	Tyr	His
Asp	His	Ala	Ile	Phe	Leu	Thr	Arg	Gln	Asp	Phe	Gly	Pro	Ser	Gly	Met
Gln	Gly	Tyr	Ala	Pro	Val	Thr	Gly	Met	Cys	His	Pro	Val	Arg	Ser	Cys
Thr	Leu	Asn	His	Glu	Asp	Gly	Phe	Ser	Ser	Ala	Phe	Val	Val	Ala	His
Glu	Thr	Gly	His	Val	Leu	Gly	Met	Glu	His	Asp	Gly	Gln	Gly	Asn	Arg
Cys	Gly	Asp	Glu	Val	Arg	Leu	Gly	Ser	Ile	Met	Ala	Pro	Leu	Val	Gln
Ala	Ala	Phe	His	Arg	Phe	His	Trp	Ser	Arg	Cys	Ser	Gln	Gln	Glu	Leu
Ser	Arg	Tyr	Leu	His	Ser	Tyr	Asp	Cys	Leu	Arg	Asp	Asp	Pro	Phe	Thr
His	Asp	Trp	Pro	Ala	Leu	Pro	Gln	Leu	Pro	Gly	Leu	His	Tyr	Ser	Met
Asn	Glu	Gln	Cys	Arg	Phe	Asp	Phe	Gly	Leu	Gly	Tyr	Met	Met	Cys	Thr
Ala	Phe	Arg	Thr	Phe	Asp	Pro	Cys	Lys	Gln	Leu	Trp	Cys	Ser	His	Pro
Asp	Asn	Pro	Tyr	Phe	Cys	Lys	Thr	Lys	Lys	Gly	Pro	Pro	Leu	Asp	Gly
Thr	Met	Cys	Ala	Pro	Gly	Lys	His	Cys	Phe	Lys	Gly	His	Cys	Ile	Trp

Leu Thr Pro Asp Ile Leu Lys Arg Asp Gly Asn Trp Gly Ala Trp Ser  
 545 550 555 560  
 Pro Phe Gly Ser Cys Ser Arg Thr Cys Gly Thr Gly Val Lys Phe Arg  
 565 570 575  
 Thr Arg Gln Cys Asp Asn Pro His Pro Ala Asn Gly Gly Arg Thr Cys  
 580 585 590  
 Ser Gly Leu Ala Tyr Asp Phe Gln Leu Cys Asn Ser Gln Asp Cys Pro  
 595 600 605  
 Asp Ala Leu Ala Asp Phe Arg Glu Glu Gln Cys Arg Gln Trp Asp Leu  
 610 615 620  
 Tyr Phe Glu His Gly Asp Ala Gln His His Trp Leu Pro His Glu His  
 625 630 635 640  
 Arg Asp Ala Lys Glu Arg Cys His Leu Tyr Cys Glu Ser Lys Glu Thr  
 645 650 655  
 Gly Glu Val Val Ser Met Lys Arg Met Val His Asp Gly Thr Arg Cys  
 660 665 670  
 Ser Tyr Lys Asp Ala Phe Ser Leu Cys Val Arg Gly Asp Cys Arg Lys  
 675 680 685  
 Val Gly Cys Asp Gly Val Ile Gly Ser Ser Lys Gln Glu Asp Lys Cys  
 690 695 700  
 Gly Val Cys Gly Gly Asp Asn Ser His Cys Lys Val Val Lys Gly Thr  
 705 710 715 720  
 Phe Ser Arg Ser Pro Lys Lys Leu Gly Tyr Ile Lys Met Phe Glu Ile  
 725 730 735  
 Pro Ala Gly Ala Arg His Leu Leu Ile Gln Glu Ala Asp Thr Thr Ser  
 740 745 750  
 His His Leu Ala Val Lys Asn Leu Glu Thr Gly Lys Phe Ile Leu Asn  
 755 760 765  
 Glu Glu Asn Asp Val Asp Pro Asn Ser Lys Thr Phe Ile Ala Met Gly  
 770 775 780  
 Val Glu Trp Glu Tyr Arg Asp Glu Asp Gly Arg Glu Thr Leu Gln Thr  
 785 790 795 800  
 Met Gly Pro Leu His Gly Thr Ile Thr Val Leu Val Ile Pro Glu Gly  
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 Asp Ala Arg Ile Ser Leu Thr Tyr Lys Tyr Met Ile His Glu Asp Ser  
 820 825 830  
 Leu Asn Val Asp Asp Asn Asn Val Leu Glu Asp Asp Ser Val Gly Tyr  
 835 840 845  
 Glu Trp Ala Leu Lys Lys Trp Ser Pro Cys Ser Lys Pro Cys Gly Gly  
 850 855 860  
 Gly Ser Gln Phe Thr Lys Tyr Gly Cys Arg Arg Arg Leu Asp His Lys  
 865 870 875 880

Met Val His Arg Gly Phe Cys Asp Ser Val Ser Lys Pro Lys Ala Ile  
885 890 895

Arg Arg Thr Cys Asn Pro Gln Glu Cys Ser Gln Pro Val Trp Val Thr  
900 905 910

Gly Glu Trp Glu Pro Cys Ser Arg Ser Cys Gly Arg Thr Gly Met Gln  
915 920 925

Val Arg Ser Val Arg Cys Val Gln Pro Leu His Asn Asn Thr Thr Arg  
930 935 940

Ser Val His Thr Lys His Cys Asn Asp Ala Arg Pro Glu Gly Arg Arg  
945 950 955 960

Ala Cys Asn Arg Glu Leu Cys Pro Gly Arg Trp Arg Ala Gly Ser Trp  
965 970 975

Ser Gln Cys Ser Val Thr Cys Gly Asn Gly Thr Gln Glu Arg Pro Val  
980 985 990

Leu Cys Arg Thr Ala Asp Asp Ser Phe Gly Val Cys Arg Glu Glu Arg  
995 1000 1005

Pro Glu Thr Ala Arg Ile Cys Arg Leu Gly Pro Cys Pro Arg Asn Thr  
1010 1015 1020

Ser Asp Pro Ser Lys Lys Ser Tyr Val Val Gln Trp Leu Ser Arg Pro  
1025 1030 1035 1040

Asp Pro Asn Ser Pro Val Gln Glu Thr Ser Ser Lys Gly Arg Cys Gln  
1045 1050 1055

Gly Asp Lys Ser Val Phe Cys Arg Met Glu Val Leu Ser Arg Tyr Cys  
1060 1065 1070

Ser Ile Pro Gly Tyr Asn Lys Leu Cys Cys Lys Ser Cys Asn Pro His  
1075 1080 1085

Asp Asn Leu Thr Asp Val Asp Asp Arg Ala Glu Pro Pro Ser Gly Lys  
1090 1095 1100

His Asn Asp Ile Glu Glu Leu Met Pro Thr Leu Ser Val Pro Thr Leu  
1105 1110 1115 1120

Val Met Glu Val Gln Pro Pro Pro Gly Ile Pro Leu Glu Val Pro Leu  
1125 1130 1135

Asn Thr Ser Ser Thr Asn Ala Thr Glu Asp His Pro Glu Thr Asn Ala  
1140 1145 1150

Val Asp Val Pro Tyr Lys Ile Pro Gly Leu Glu Asp Glu Val Gln Pro  
1155 1160 1165

Pro Asn Leu Ile Pro Arg Arg Pro Ser Pro Tyr Glu Lys Thr Arg Asn  
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Gln Arg Ile Gln Glu Leu Ile Asp Glu Met Arg Lys Lys Glu Met Leu  
1185 1190 1195 1200

Gly Lys Phe

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 <212> PRT  
 <213> Homo sapiens

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<211> 3974

<212> DNA

<213> Homo sapiens

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<213> Unknown

<220>  
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<210> 16  
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<212> DNA  
<213> Eimeria tenella

<400> 16  
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<210> 18  
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 <212> DNA  
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 <211> 4180  
 <212> DNA  
 <213> Unknown

<220>  
 <223> Description of Unknown Organism:Unknown

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11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



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<213> Unknown

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<223> Description of Unknown Organism: Unknown

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 <211> 4108  
 <212> DNA  
 <213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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1860  
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<211> 820  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<210> 28  
<211> 2397  
<212> DNA  
<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

<400> 28

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gggtggcttct ggctgagatg tttgctgttg ttttcttcat cttgtctttg atgacttggtc 180  
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aattctctta gttctttgat aacaatttgt tcaactatag aaacattatt aattggtagg 2340  
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<210> 29

<211> 4100

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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ccacttcggc tcccgtcct gctcctgctc ccggccccac tctgttcct gttcctgttc 180  
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cgggtctcca ggcccagaca aaataaaaaa agatatattt ttccagtcgc tctctccgc 300  
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ggccattag caccaattgg ccagagtgtc gggagccacc gctaattgca gtaacgcgcg 660  
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<211> 1886

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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<210> 37

<211> 3015

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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<210> 38

<211> 38186

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

<400> 38

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atattagtgg caccagctgg gatggtgaca atgtcattgt agccataatt ggtggggggtg 180  
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tccccccng ntggaatnat tggacttgg gtctccga 578

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<212> DNA  
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<220>  
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<223> N is any nucleic acid

<220>  
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<222> (146)  
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ctggacangt tgatgatagg gtctgncgcc ccataccctc tcctcttccc ccttaggaat 180  
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ccagg 305



<210> 44  
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<212> DNA  
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ccggctggca gaggcgaact gtagagtga gggacccctc cggtgcaggc ctctgccacc 180  
tgcaacaagg ctctggaaac ccgaggatgc caagccctgg cagaaccagc tgtgccccct 240  
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<210> 45  
<211> 102  
<212> DNA  
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<222> (72)  
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<210> 46  
<211> 123  
<212> DNA  
<213> Unknown

<220>  
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<223> N is any nucleic acid

<400> 46

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cgn 123

<210> 47

<211> 109

<212> DNA

<213> Unknown

<220>

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<220>

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<222> (87)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (95)

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<221> Misc\_feature

<222> (102)

<223> N is any nucleic acid

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<222> (106)

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<222> (107)

<223> N is any nucleic acid

<400> 47

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<210> 48

<211> 293

<212> DNA

<213> Homo sapiens

<220>

<221> Misc\_feature

<222> (86)

<223> N is any nucleic acid

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<221> Misc\_feature

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cttcccttgc tgctgctgct gctgctgctg ctgccggccc cggagntggg cccgagccag 180  
gccgnagctg aggagaacga cttgggttng cctnccana aaatgggaag ggantttggg 240  
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<210> 49  
<211> 506  
<212> DNA  
<213> Homo sapiens

<220>  
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<220>  
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<222> (461)  
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<210> 50  
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<212> DNA  
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<220>

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<220>  
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<222> (418)  
<223> N is any nucleic acid

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ggggtggtgg ttatgancag cagtctgtca cagctcagcg aggtgaagcc tgtgggcgtt 180  
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gaactcactt cctcttcctc ctgctgncac ctgtcttttg gcttgtggga ttggagtcac 360  
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<210> 51  
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<212> DNA  
<213> Saccharomyces cerevisiae

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<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

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<223> N is any nucleic acid

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<220>  
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<222> (426)

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<400> 51

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agtcacctggg actccacact ccgagccagc tcccaccccc agcatgactg gcctgcctct 240

gtctgctctt ccaccacctc ttgcacaaag cccagtcttc cggcccagaa catcctgggc 300

ccggagttcc ttctttgcct tnaggggntt ttcagcaagt tnagtctctt gggtcctttt 360

tgggaaantt naggnagttn aaggantacc aggttnttgc catnctttcc agatccaagt 420

ttnacnaaaa attttnaaca gtntaaattg ggtttnttgn cccttttngg nggntgtttt 480

tttttcggg tccgg 495



<210> 52  
<211> 81  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<222> (65)  
<223> N is any nucleic acid

<220>  
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<222> (67)  
<223> N is any nucleic acid

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<223> N is any nucleic acid

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<222> (75)  
<223> N is any nucleic acid

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<210> 53  
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<212> DNA  
<213> Homo sapiens

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<223> N is any nucleic acid

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<223> N is any nucleic acid

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<223> N is any nucleic acid

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<222> (289)  
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taagtcatca cttccgacaa cagagggtgg ctataatgat gcagcagcag cagcagcagc 180  
aacagcagca gcagcagcag cagcagcagc aacagcaaca gcaacagcaa cagcagcaac 240  
agcagcaaac ccaggncttc agcccacctc ctaatgtgac tgcttccnc agcatggatg 300  
ggctt 305

<210> 54  
<211> 307  
<212> DNA  
<213> Hepatitis C virus

<220>  
<221> Misc\_feature  
<222> (212)  
<223> N is any nucleic acid

<400> 54  
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gaggtctgga agataaccga ttcttgggag atttgggggt agtctccaat ctgtccctgg 180  
ctcatcttgt gaccogaagc cggcggcctt gncaggagta ttctagaatg agtgacata 240  
aaaatacctt caaacggtag cagcagcagc agcagcagca gcagcaagca gcagcagcag 300  
cagcagc 307

<210> 55  
<211> 88  
<212> DNA  
<213> Unknown

<220>  
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<222> (6)  
<223> N is any nucleic acid

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<222> (7)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (78)

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cggtcacaag gaaaatggat tcagtttgca tctctccctc ctttaaacag cttctccggg 240  
tctcagcatg ggcttccagg gcagcgattg aggagacntt accaaggngc accacacant 300  
agatgctgag acntcgtgac tccaggataa gaaacattaa cngggg 346

<210> 57  
<211> 496  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

<220>  
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<220>  
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<222> (197)  
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<222> (291)  
<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

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<223> N is any nucleic acid

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<220>  
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<222> (346)  
<223> N is any nucleic acid

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<223> N is any nucleic acid

<400> 57

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gtcaatgggt ggctggagat gtcacatggtc tatccccgga ccaacaagca gaatcagaag 180

aagaaacgga aagtgnnagc cccccacacc acaggagcct gggactgccca agttgggctg 240

ttaccagcag cagcagcagc agcagcagca gcagcagcat ccccantgct ntnggaaagt 300

tcccaccacc aagtncacac atttgggnaa aaaccaaggt tgtgnagac gngntttngg 360

gatttnggca ttgtgggttg cttgcatgga aggacattng gttgtnggtn ccttggangn 420

tacaattacc atttncggtt gtnaaggta aanntccgnc attcagaagg nttnaagggtg 480

ntttgaagtc catttg 496

<210> 58  
<211> 268  
<212> DNA  
<213> Drosophila sp.

<220>  
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<222> (16)  
<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

<220>  
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<222> (60)  
<223> N is any nucleic acid

<220>  
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<222> (202)  
<223> N is any nucleic acid

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ttccaattag gcaggggggtt gtaogctccc tgtcctatga ggaaccaga agacactcac 180  
ccccattga gaagcagctc tntccagcca ttcagaaact catggtcagg agcgagacc 240  
tccacccatt gtcagagctg cctgaaaa 268

<210> 59  
<211> 471  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (249)  
<223> N is any nucleic acid

<220>  
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<220>  
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<222> (449)  
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<400> 59  
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gggcctgtgt gtccatgtgc cctgctcctt ctctacccc caggatggct ggactgactc 240  
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ggccacaaac aaccagaca gagaagtga ggcagagacc cagggcogat tocaactcct 360  
tggggacatt tggagcaacg actgcncct gagcatcaga gacgccagga agagggataa 420  
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<210> 60

<211> 379

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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<221> Misc\_feature

<222> (2)

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<222> (14)

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<222> (332)

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<222> (349)

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<223> N is any nucleic acid

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<221> Misc\_feature

<222> (374)

<223> N is any nucleic acid

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cgccaccacc gtagnacga gcagcagcag cagcagcagc aagagttaac tctgacttag 180  
ggaatagaga cagccagaga gaaatgtgat caatgaagga gacatctgga gtgtgcgtgc 240  
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atcttttctt tttcntaaaa ttgttggtat gnaaatttgg gttttccng taacttntta 360  
aaaacttaaa agtnggttt 379

<210> 61

<211> 255

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

<220>

<221> Misc\_feature

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<222> (183)

<223> N is any nucleic acid

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<222> (255)

<223> N is any nucleic acid

<400> 61

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nactgccagg gtcagacagt ccatttgctg ctgctgctgc tgctgctgct ttctcgaact 180  
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aatgttcttt cctnn 255

<210> 62  
<211> 5289  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<211> 2053  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<211> 4339  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<211> 186  
<212> DNA  
<213> Unknown



<220>

<223> Description of Unknown Organism:Unknown

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<210> 66

<211> 5774

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

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 <211> 5535  
 <212> DNA  
 <213> Unknown

<220>  
 <223> Description of Unknown Organism:Unknown

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 <212> DNA  
 <213> Unknown

<220>  
 <223> Description of Unknown Organism:Unknown

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<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

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<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<400> 70  
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gaggacagca ggtacatctt ctcatggag cccgacgcca acagcaccag ccgcgcgccg 660  
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<210> 71  
<211> 1986  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<400> 71  
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aaaagg 1986

<210> 72  
<211> 2003  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<220>  
<221> Misc\_feature

<222> (31)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (32)  
<223> N is any nucleic acid

<400> 72  
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gcacccccaa taaataaata aaaggaggag ggcaaggggg gaggaggagg agtggtgctg 180  
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agaagcccg cgcacctcg caccatgaga tggcgacgag ccccgcgccg ctccgggctg 300  
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gagcccgggg aggagggcgc ctatctggtg aaggtgcacc aggtgtgggc ggtgaaagcc 780  
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cgcatataca aagcatcact ggctgattct ggagagtata tgtgcaaagt gatcagcaaa 1260  
ttaggaaatg acagtgcctc tgccaatata accatcgtgg aatcaaacgc tacatctaca 1320  
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aatggagggg agtgcttcat ggtgaaagac ctttcaaacc cctcgagata cttgtgcaag 1440  
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tgttgctgca tctcccctca gattccacct agagctagat gtgtcttacc agatctaata 1620

ttgactgcct ctgcctgtcg catgagaaca ttaacaaaag caattgtatt acttcctctg 1680  
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 ttgatattga atgatgtgat acaaattgat agtcaatatc aagcagtga atatgataat 1800  
 aaaggcattt caaagtctca cttttattga taaaataaaa atcattctac tgaacagtcc 1860  
 atcttcttta tacaatgacc acatcctgaa aagggtgttg ctaagctgta accgatatgc 1920  
 acttgaaatg atggtaagtt aattttgatt cagaatgtgt tatttgcac aaataaacat 1980  
 aataaaagga aaaaaaaaaa aaa 2003

<210> 73  
 <211> 957  
 <212> DNA  
 <213> Unknown

<220>  
 <223> Description of Unknown Organism:Unknown

<220>  
 <221> Misc feature  
 <222> (809)  
 <223> N is any nucleic acid

<220>  
 <221> Misc feature  
 <222> (810)  
 <223> N is any nucleic acid

<220>  
 <221> Misc feature  
 <222> (811)  
 <223> N is any nucleic acid

<400> 73  
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 agatttgctt gcggagggcg agagggcccc ccgccccgcc cccggcactg cctggacttg 180  
 ctgctgcagc aaactgcaag aaggggcccc cgagctggag ggttttgtgc agcagctgag 240  
 ttttgttgca gggaagctgg cctgctgcct gcgggtggg gcggagcagc tggcgcgctg 300  
 cgctgcggag gggcggtcgc ccagcagcag cagcagcagc agctgctgcg cgctgctgca 360  
 gctcgagaag caggacctcg agcagagcct cgaggccggc aagcagggcg cggagtgcct 420  
 cttgaggagc agcaaactgg ccctcgaggc cctcctcgag ggggcccgcg ttgcagcaac 480  
 gcgggggttg ctgctggctg agagcagcaa agacacggtg ctgcgcagca ttccccacac 540  
 ccaggagaag ctggcccagg cctacagttc tttcctgcgg ggctaccagg gggcagcagc 600  
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cagctacggg ggcggggccg cctccagcca gcagccctcc ggctttcttct ggtagccctg 720  
cagcagcagc agcagcagca gcagcagcag cagcgcgggc ggagcccgcg gcggggcccg 780  
ggcgccgctg cagcaacagc agcagccggn nccgctagcg ccgcgagca ctcgcaggga 840  
actccacagg cagcgggaga gcagcaggga cgagaagcag gtcattgtag gcaggcagca 900  
gcgccagctg cagcagcagc agcagcagca gcagcagcag cagcagctcc tgcaccg 957

<210> 74  
<211> 957  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<220>  
<221> Misc feature  
<222> (809)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (810)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (811)  
<223> N is any nucleic acid

<400> 74  
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caaaatggca gacctcttca gcggactcgt gggcgcgctc gtcggcgctg ttgctgcagc 120  
agatttgctt gcggagggcg agagggcccc ccgccccgcc cccggcactg cctggacttg 180  
ctgctgcagc aaactgcaag aaggggcccc cgagctggag ggttttgtgc agcagctgag 240  
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cgctgcggag gggcggtgc ccagcagcag cagcagcagc agctgctgcg cgctgctgca 360  
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cagctacggg ggcggggccg cctccagcca gcagccctcc ggctttcttct ggtagccctg 720  
cagcagcagc agcagcagca gcagcagcag cagcgcgggc ggagcccgcg gcggggcccg 780

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ggcgccgctg cagcaacagc agcagccgnn nccgctagcg ccgcgagca ctgcagga 840  
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<210> 75  
<211> 1089  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<220>  
<221> Misc feature  
<222> (376)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (377)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (847)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (848)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (849)  
<223> N is any nucleic acid

<220>  
<221> Misc feature  
<222> (850)  
<223> N is any nucleic acid

<400> 75  
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ggcgtcgtcg gcgctgttgc tgcagcagat ttgcctgcgg agggcgagag ggccccccgc 180  
cccgcccccg gcactgcctg gacttgctgc tgcagcaaac tgcaagaagg ggcccgcgag 240  
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agcagcagct gctgcnnct gctgcagctc gagaagcagg acctcgagca ggcctcgag 420  
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ctcgagggggg cccgcgttgc agcaacgcgg ggtttgctgc tggtcgagag cagcaaagac 540  
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acggaattc 1089

<210> 76  
<211> 1985  
<212> DNA  
<213> Unknown

<220>  
<223> Description of Unknown Organism:Unknown

<400> 76  
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ctctcccggc cgagccgcgg cggcagcagc agcagcagca gcagcaggag gaggagcccg 180  
gtggcggcgg tggccgggga gcccatggcg tacagtcaag gaggcggcaa aaaaaaagtc 240  
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cctcatagaa tcogcatgac ccataacttg ctgttaaatt atggcttata cagaaaaatg 360  
gaaatatata ggccccataa agccactgcc gaagaaatga caaaatatca cagtgatgag 420  
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 aaccagaaca ctccagaata tatggaaaag ataaaacagc gtttgtttga aaatttgcgc 1320  
 atgttacctc atgcacctgg tgtccagatg caagctattc cagaagatgc tgttcatgaa 1380  
 gacagtggag atgaagatgg agaagatcca gacaagagaa tttctattcg agcatcagac 1440  
 aagcggatag cttgtgatga agaattctca gattctgagg atgaaggaga aggaggtcga 1500  
 agaaatgtgg ctgatcataa gaaaggagca aagaaagcta gaattgaaga agataagaaa 1560  
 gaaacagagg acaaaaaaac agacgttaag gaagaagata aatccaagga caacagtggg 1620  
 gaaaaaacag ataccaaagg aaccaaatac gaacagctca gcaaccctg aatttgacag 1680  
 tctcaccaat ttcagaaaat cattaaaaag aaaatattga aaggaaaatg ttttcttttt 1740  
 gaagacttct ggcttcattt tatactactt tggcatggac tgtatttatt ttcaaattggg 1800  
 actttttcgt ttttgttttt ctgggcaagt tttattgtga gattttctaa ttatgaagca 1860  
 aaatttcttt tctccaccat gctttatgtg atagtattta aaattgatgt gagttattat 1920  
 gtcaaaaaaa ctgatctatt aaagaagtaa ttggcctttc tgagctgaaa aaaaaaaaaa 1980  
 aaaag 1985

<210> 77

<211> 476

<212> DNA

<213> Unknown

<220>

<223> Description of Unknown Organism:Unknown

<400> 77

ccaccctcct cccctcccc cgccacttc gctaaacttg tggtgttgt gatgcgtatt 60  
 cctgtagatc cgagcaccag ccggcgcttc agccccct ccagcagcct gcagcccggc 120  
 aaaatgagcg acgtgagccc ggtggtggct gcgcaacagc agcagcaaca gcagcagcag 180  
 caacagcagc agcagcagca gcaacagcag cagcagcagc aggaggcggc ggccggcggt 240  
 gcggcggcag ccggcggtgc ggccggcgga gctgcagtgc cccggttgcg gccgccccac 300  
 gacaaccgca ccatggtgga gatcatcgcc gaccaccgga ccgaactcgt ccgcaccgac 360

agccccaact tctgtgctc ggtgctgccc tcgcactggc gctgcaacaa gaccctgccc 420  
gtggccttca aggtaagagg ctaccccgcc ccccgccccc ggccgggagc ggcgga 476

<210> 78  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 78  
gcattttgga tccgcctttt catg 24

<210> 79  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 79  
gttgtgtgct gcagattgtt cc 22

<210> 80  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 80  
gaaaaatggg gatccgaggt g 21

<210> 81  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 81  
gcaggagaat tccgtccatg 20

<210> 82  
<211> 5  
<212> PRT

<213> Homo sapiens

<220>

<221> Misc\_feature

<222> (3)

<223> Xaa is any amino acid

<400> 82

Trp Ser Xaa Trp Ser  
1 5

<210> 83

<211> 6

<212> PRT

<213> Homo sapiens

<400> 83

Cys Ser Val Thr Cys Gly  
1 5

<210> 84

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> Misc\_feature

<222> (4)

<223> Xaa is any amino acid

<400> 84

Gly Cys Gln Xaa Arg  
1 5

<210> 85

<211> 733

<212> DNA

<213> Homo sapiens

<400> 85

gggatccgga gcccaaactt tctgacaaaa ctacacatg cccaccgtgc ccagcacctg 60  
aattcgaggg tgcaccgtca gtcttctctt tcccccaaaa acccaaggac accctcatga 120  
tctcccggaac tcttgaggtc acatgcgtgg tgggtggacgt aagccacgaa gaccctgagg 180  
tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240  
aggagcagta caacagcacg taccgtgtgg tcagcgtcct caccgtcctg caccaggact 300  
ggctgaatgg caaggagtac aagtgcgaag tctccaacaa agccctocca acccccatcg 360  
agaaaacat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420  
catcccggga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 480

atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga 540  
ccacgcctcc cgtgctggac tccgacggct ccttcttctt ctacagcaag ctcaccgtgg 600  
acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660  
acaaccacta cacgcagaag agcctctccc tgtctccggg taaatgagtg cgacggccgc 720  
gactctagag gat 733

<210> 86  
<211> 86  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 86  
gcgcctcgag atttccccga aatctagatt tccccgaaat gatttccccg aatgatttc 60  
cccgaaatat ctgccatctc aattag 86

<210> 87  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:DNA Primer

<400> 87  
gcggcaagct ttttgcaaag cctaggg 27

<210> 88  
<211> 271  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR Fragment

<400> 88  
ctcgagattt ccccgaaatc tagatttccc cgaaatgatt tccccgaaat gatttccccg 60  
aaatatctgc catctcaatt agtcagcaac catagtcccg ccctaactc cgcccatccc 120  
gcccctaact ccgcccagtt ccgcccattc tccgcccacat ggctgactaa ttttttttat 180  
ttatgcagag gccgaggccg cctcggcctc tgagctattc cagaagtagt gaggaggctt 240  
ttttggaggc ctaggctttt gcaaaaagct t 271

<210> 89

<211> 32  
<212> DNA

<213> Homo sapiens

<400> 89  
gcgctcgagg gatgacagcg atagaacccc gg 32

<210> 90  
<211> 31  
<212> DNA  
<213> Homo sapiens

<400> 90  
gcgaagcttc gcgactcccc ggatccgcct c 31

<210> 91  
<211> 12  
<212> DNA  
<213> Homo sapiens

<400> 91  
ggggactttc cc 12

<210> 92  
<211> 73  
<212> DNA  
<213> Homo sapiens

<400> 92  
gcggcctcga ggggactttc ccggggactt tccggggact ttccgggact ttccatcctg 60  
ccatctcaat tag 73

<210> 93  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR Fragment

<400> 93  
gcggcaagct ttttgcaaag ctaggc 27

<210> 94  
<211> 652  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature



<222> (524)

<223> N is any nucleic acid

<400> 94

ggcataagat cacacttttag ttcagagaca catttgcata aatacttgaa atggatccac 60  
ccctgcaggt ggcagcctga gaacatggcg ctgcaggggg accagggcag cgtctgggtc 120  
aggtggacga acagcgggtgc catcacgtgg tgcttgccca tgggcccga gagccgtgtg 180  
cagggcttgg agtcgtcgtg gggcatgctg aggacgtgcc ctagttcatg ggccaggggtg 240  
tgggcccgcct ggagcccctc atcctcgatc acggagcagc ttttgttggg gtcacaaatg 300  
gtcccgatgt ctgccacacc caggggtgtca cacagcccct cctgcccaca gaagttctgt 360  
ctggtgagca ggatggcogt gtcgtagtgc tctgggtggc ggtcgctggg ctggttgaaa 420  
cgccgctgcc agttgcagaa gttacgcagt gtaagcccc cattgtcgga cacctctggg 480  
ccccattttt catottotac gatcagcact tttaccacca tcangttgat ggaattcttg 540  
atgctgggggt gcttgtagaa tcgggcttgc cacgaaaatt aacctcagga tgtggttctg 600  
caggtcggcc cgtaaagggc gccatggacg catcggccac caacagcgtt tc 652

<210> 95

<211> 716

<212> DNA

<213> Homo sapiens

<220>

<221> Misc\_feature

<222> (578)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (658)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (666)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (678)

<223> N is any nucleic acid

<400> 95

taagtttgct agtcctttgc aaacagactg acgctgagtg tcctgtctga gtcaataagt 60  
goacttttac cttttaacct atgccctcta cttgaacccg agcaaggctc agtcactgg 120  
acagttgatg atagggctctg ccgccccata cctctcctc ttccccctta ggaatttggtg 180  
cagtactgga ggggttgctg caatgggagg cctgggtggg ccgtgctgcc ttgatatggc 240

caagggaccc agtcaccaca gtggagaccc ttgtctgcac ctcaagtaccg catgtccagg 300  
agcacaagac tggccctgc cccctgaat cacagggggc acagctggct ttcgcagggc 360  
ttggcatcct cgggtttcag agccttggtg caggtggcag aggcctggcc ggaggggtcc 420  
ctgcactcta cagttcgct ctgccagccg gccccgcagg tgctagagca ctcaagaccag 480  
tccccagca cccactgtgc gtggagcagc ggctggatga tgttggtggt tgctctctct 540  
ttgctgctct gcatgctaaa agtcacgtca ttaggaanca aagaaggtgt atttgacttt 600  
ttggggggaa gaacctcgcc caggactgtc aggagctgca ctgtcagaag gctctgcnaa 660  
ggcccngaag ctctgcangc gctccagggg ggcgatggag ccgtgtactt caggat 716

<210> 96  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 96  
ggcataagat cacacttttag ttcagagaca catttgcata aatacttgaa atggatccac 60  
ccctgcagggt ggcagcctga gaacatggcg ctgcaggggg accagggcag cgtctgggtc 120  
agggtggacga acagcgggtgc catcacgtgg tgcttgccca tggcctcgaa gagccgtgtg 180  
cagggcttgg agtcgtcgtg gggcatgctg aggacgtgcc ctagtccatg ggccaggggtg 240  
tgggcccgtg gagccctcat cctcgatcac ggagcagctt ttgttggggg cacaaatggg 300  
cccgatgtct gccacaccca ggggtgtcaca cagccctcc tgccacaga agttctgtct 360  
ggtgagcagg atggcctgt cgtagtgtct tgggtggcgg tcgctgggct ggttgaaacg 420  
ccgctgccag ttgcagaagt tacgcagtgt aaggcccca ttgtcggaca gctctggggc 480  
ccatttttca tcttctacga tcagcacttt taaccacatc aggttgatgg aattcttgat 540  
gcc 543

<210> 97  
<211> 377  
<212> DNA  
<213> Mus musculus

<400> 97  
gcaaagtgcc accacccttc ggatccaaaa ctagaagcaa gaggtttgtg tccgaggctc 60  
gcttcgtgga aacacttctg gtggctgatg cgtccatggc tgccttctat gggaccgacc 120  
tgcagaacca catcctcacg gtgatgtcaa tggcagcccg aatctacaag cacccgagca 180  
tcaagaactc cgtcaacctt gtgggtggtga aagtgtaat agtgaagag gaaggtggg 240  
gcccggagggt gtccgacaac ggggggctca cactgcgcaa cttctgcagc tggcaacggc 300

gtttcaacaa gccagtgac cgccaccgg agcactatga cactgccatc ttgttcacca 360  
gacagaactt ctgtggg 377

<210> 98  
<211> 432  
<212> DNA  
<213> Rattus norvegicus

<220>  
<221> Misc\_feature  
<222> (42)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (214)  
<223> N is any nucleic acid

<400> 98  
ctaaagtaca gtggttccat ggccaccctg gagcggctgc anagcttcca agccctccct 60  
gagcctctta cagtacagct cctgactgtg tctggtgagg tcttccctcc aaaagtcaaa 120  
tataccttct tcgtcccaaa tgacacggac ttcaacgtgc agagtagcaa agaaagagca 180  
agcaccaaca tcattcagtc cttgccctat gcanagtggg tgctggggga ctggtctgaa 240  
tgtccaagca catgtggagg tggctggcag cggcggactg tggaatgcag ggaccctca 300  
ggtcaggcct ctgacacctg tgatgaggct ctgaaacctg aggatgcaa gccctgtgga 360  
agccagccat gtctcctctg atccccttgg tggacatgtc taaggcttat ggatttgggc 420  
tactggcggtt tt 432

<210> 99  
<211> 354  
<212> DNA  
<213> Mus musculus

<400> 99  
caaagtgcac cacccttcgg atccaaaact agaagcaaga ggtttgtgtc cgaggctcgc 60  
ttcgtggaaa caattctggt ggctgatgcg tccatggctg ccttctatgg gaccgacctg 120  
cagaaccaca toctcacggt gatgtcaatg gcagccacga atctacaagc acccgagcat 180  
caggaactcc gtcaaccttg tgggtggtgaa agtgctaata gtggaagagg aaggatgggg 240  
cccgagtggt cggacaacgg ggggctcaca ctgcgcaact totgcagctg gcaacggcgt 300  
ttcaacaagc ccagtgaccg ccaccggag cactatgaca ctgccatctt gttc 354

<210> 100  
<211> 389

<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (136)  
<223> N is any nucleic acid

<400> 100  
ttgtgcccag aagacactgg ccctggggcc tgggttgagt tcaaaaccaa aagaaagaag 60  
aaaagtgctg taaattcggg atttctccac cggatgctcc tgcttccgca tgggtgtcac 120  
ctccatgccg ttctncctc tttctagga aaagcttcag ggagcagcag tgtgagaagt 180  
ataatgccta caattacact gacatggacg ggaatctcct gcagtgggtc cccaagtatg 240  
ctgggggtgc cccccgggac cgcctggcaa gttgttctgc cgagcccgga ggaggagcga 300  
gttcaaagtg ttcgaggcca aggtgagaat caccctgggg gacttcagat ccagagatgg 360  
ggggaggga ggtcggcctg ttccccaca 389

<210> 101  
<211> 305  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (128)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (146)  
<223> N is any nucleic acid

<400> 101  
catttaagtt tgctagtcct ttgcaaacag actgacgtg agtgtcctgt ctgagtcaat 60  
aagtgcactt ttaccttita acctatgcc cttacttgaa cccgagcaag gtccagtcca 120  
ctggacangt tgatgatagg gtctgnogcc ccataccctc tcctcttccc ccttaggaat 180  
ttgtgcagta ctggaggggt tgcggcaatg ggaggcctgg gtgggccgtg ctgccttgat 240  
atggccaagg gaccagtcac ccacagtga gaccctgtgc tgcacctcag taccgcatgt 300  
ccagg 305

<210> 102  
<211> 152  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (105)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (122)

<223> N is any nucleic acid

<220>

<221> Misc\_feature

<222> (135)

<223> N is any nucleic acid

<400> 102

atcgtagaag atgaaaaatg gggcccagag gtgtccgaca atggggggct tacactgcgt 60  
aactttctgca actggcagcg gcgtttcaac cagcccagcg accgncaccc agagcactac 120  
gncacggcca tcctnctcac cagacagaac tt 152

<210> 103

<211> 632

<212> DNA

<213> Homo sapiens

<400> 103

tttaataata ataatgcccg gggctttatt atgctgtatc actgctcaga ggtaataaat 60  
cctcactaac tatectatca aatttgcaac tggcagttta ctctgatgat tcaactcett 120  
ttctatctac ccccataatc ccaccttact gatacacctc actgggttact ggcaagatac 180  
gctggatccc tccagccttc ttgctttccc tgcaccagcc cttoctoact ttgccttgcc 240  
ctcaaagcta acaccactta aaccacttaa ctgcattctg ccattgtgca aaagtctatg 300  
aaatgttttag gtttctttaa aggatcacag ctctcatgag ataacacccc tccatcatgg 360  
gacagacact tcaagcttct ttttttgtaa cccttcccac aagtcttaga acatgatgac 420  
cactccccca gctgccactg ggggcagga tggctctgcac aaggctctggg gctggctggc 480  
ttcacttcct ttgcacactc ggaagcaggc tgtccattaa tgtctoggca ttctaccagt 540  
cttctctgcc aaccaattc acatgactta gaacattgcg cccactcttc aatgacccat 600  
gctgaaaaag tggggatagc attgaaagaa tc 632

<210> 104

<211> 519

<212> DNA

<213> Homo sapiens

<400> 104

tttttttcta aacttgtaat agatgtaaca aaagaaataa taataataat gcccggggct 60  
ttattatgct atatcactgc tcagagggtta ataatcctca ctaactatcc tatcaaattt 120

gcaactggca gtttactctg atgattcaac tccttttcta tctaccccca taatcccacc 180  
ttactgatac acctcactgg ttactggcaa gatacgctgg atccctccag ccttcttget 240  
ttccctgcac cagcccttcc tcactttgcc ttgccctcaa agctaacc accttaacca 300  
cttaactgca ttctgccatt gtgcaaaagt ctatgaaatg tttaggtttc tttaaaggat 360  
cacagctctc atgagataac acccctccat catgggacag acacttcaag cttctttttt 420  
tgtaaccctt cccacaggtc ttagaacatg atgaccactc cccagctgc cactgggggc 480  
agggatgtct gcacaagggc tgggtgctggc tgccccggac 519

<210> 105  
<211> 475  
<212> DNA  
<213> Homo sapiens

<400> 105  
gagtcatgat gcgatcacia ccagctttta cacactgtcc ttgcacacag acagaggtgg 60  
aatctgggct acatggagta ccatctacia ccttgggctg caaaacgaag aagtagccaa 120  
tgcccttggc ttggcagatg agcttgacc tgcctttgg tgagacgcca gcgtacttgg 180  
gaatccattc caccgcaggc ccactcccaa aggaagcttt tgaaaactcg ttgtgtgctt 240  
cacattgttc ctctctaaag gtttttccat tattgtctgg acagtccca aggttacagg 300  
atctgtagcg cactcgtttg ccttcacagt acttccctcc attctttggg actgggttgt 360  
cacattccct catcgtgtac tggactcctc caccgcacgt tctogaacag tctccccaag 420  
gccccacat tccccagctt ccatgaaaag gcgtatcaaa atgctttctg tcggt 475

<210> 106  
<211> 455  
<212> DNA  
<213> Homo sapiens

<400> 106  
aataataata atgcccgggg ctttattatg ctgtatcact gctcagaggt taataatcct 60  
cactaactat cctatcaa attgcaactgg cagtttactc tgatgattca actccttttc 120  
tatctacccc cataatccca ccttactgat acacctcact gggtactggc aagatacgct 180  
ggatccctcc agccttcttg ctttccctgc accagccctt cctcactttg ccttgcctc 240  
aaagctaaca ccacttaa ac cacttaactg cattctgcca ttgtgcaaaa gtctatgaaa 300  
tgtttaggtt tctttaaagg atcacagctc tcatgagata acacccctcc atcatgggac 360  
agacacttca agcttctttt ttgttaacc ttcccacagg tcttagaaca tgatgaccac 420  
tccccagct gccactgggg gcagggatgg tctgg 455

<210> 107  
<211> 515  
<212> DNA  
<213> Homo sapiens

<400> 107  
aacccttccc acaggtctta gaacatgatg accactcccc cagctgccac tgcggggcag 60  
ggatgggtctg cacaaggtct ggtgctggct ggcttcaactt cctttgcaca ctoggaagca 120  
ggctgtccat taatgtctcg gcattcttcc agtcttctct gccaaaccaa ttcacatgac 180  
ttagaacatt cgccccactc ttcaatgacc catgctgaaa aagtggggat agcattgaaa 240  
gattccttct tcttctttac gaagtaggtg tatttaattt taggtcgaag ggcattgcc 300  
cagtaagaac ctggatggc aagggctctt tggagcaggc taaagctgcg aattctttcc 360  
aatgccgcag aggagccgct gtacctcaag acaacacctt tgtacataat gtcttgcct 420  
aaggtggaca aagtgtagtc accataaaga atatatgtgc catcagcagc ttttgatggc 480  
aggaagctgt cattgttctt ggatccctct gttcc 515

<210> 108  
<211> 359  
<212> DNA  
<213> Homo sapiens

<400> 108  
acttcgtaaa gaagaagaag gaatctttca atgctatccc cactttttca gcatgggtca 60  
ttgaagagtg gggcgaatgt tctaagtcac gtgaattggg ttggcagaga agactggtag 120  
aatgccgaga cattaatgga cagcctgctt ccgagtgtgc aaaggaagtg aagccagcca 180  
gcaccagacc ttgtgcagac catccctgcc ccagtgga gctgggggaa gtgggtcatca 240  
tgtttctaaga cctgcgggaa gggttacaaa aaaagaagct ttgaagtgtc ttgtcccatg 300  
atggaggggt gttatctcat tgagagctgt gatcctttta agaaacctaa acatttcat 359

<210> 109  
<211> 320  
<212> DNA  
<213> Homo sapiens

<400> 109  
cagagaacat tcgccccact cttcaatgac ccatgctgaa aaagtgggga tagcattgaa 60  
agattccttc ttcttcttta cgaagtaggt gtatttaatt ttaggtcgaa gggcattgcc 120  
cacagtaaga acctggatgg tcaagggctc tttgagaggg ctaaagctgc gaattctttc 180  
caatgccgca gaggagccgc tgtacctcaa gacaacacct ttgtacataa tgtcttgctc 240  
taaggtggac aaagtgtagt caccattaag aatatatgtg ccatcagcag ctttgatggc 300

aagaaagctg cccttgttcc

320

<210> 110  
<211> 316  
<212> DNA  
<213> Homo sapiens

<400> 110  
aatgccgaga cattaatgga cagcctgctt ccgagtgtgc aaaggaagtg aagccagcca 60  
gcaccagacc ttgtgcagac catccctgcc ccagtgaggca gctgggggag tggatcatcat 120  
gttctaagac ctgtgggaag ggttacaaaa aaagaagctt gaagtgtctg tcccatgatg 180  
gaggggtgtt atctcatgag agctgtgatc ctttaaagaa acctaaacat ttcatagact 240  
tttgacaaat ggcagaatgc agttaagtgg tttaagtggg gttagctttg agggcaaggc 300  
aaagtgagga agggct 316

<210> 111  
<211> 318  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (4)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (6)  
<223> N is any nucleic acid

<220>  
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atgttctaag acctgtggga aggggttaca aaaaagaagc ttgaagtgtc tgtcccatga 180  
tggaggggtg ttatctcatg agagctgtga tcctttaaag aaacctaaac atttcataga 240  
cttttgcaca atggcagaat ncagttaagt ggtttaagtg gtgttagctt tgagggaag 300  
gcaaagtgag gaagggt 318

<210> 112  
<211> 314



<212> DNA  
<213> Homo sapiens

<400> 112  
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tgcaactggc agtttactct gatgattcaa ctcccttttct atctaccccc ataatcccac 180  
cttactgata cacctcactg gttactggca agatacgtg gatccctcca gccttcttgc 240  
tttccttgca ccagcccttc ctactttgc cttgccctca aagctaacac cacttaaacc 300  
acttaactgc attc 314

<210> 113  
<211> 316  
<212> DNA  
<213> Homo sapiens

<400> 113  
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ggacagcctg cgtccgagtg tgcaaaggaa gtgaagccag ccagcaccag accttgtgca 180  
gaccatccct gccccagtg gcagctgggg ggagtggcca tcatgttcta agacctgtgg 240  
gaaggggtac aaaaaaagag gcgtgaagtg tctgtcccat gatggagggg tttatctcat 300  
gagaactgtg atcctt 316

<210> 114  
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<212> DNA  
<213> Homo sapiens

<220>  
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<223> N is any nucleic acid

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<222> (15)  
<223> N is any nucleic acid

<220>  
<221> Misc\_feature  
<222> (97)  
<223> N is any nucleic acid

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<222> (231)  
<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

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tccccacttt ttcagcatgg gtcattgaag agtggggcga atgttctaag tcatgtgaat 180  
tgggttggca gagaagactg gtagaatgcc gagacattaa tggacagcct ncttcogagt 240  
gtgcaaagna agtgaagcca gccag 265

<210> 115  
<211> 334  
<212> DNA

<213> Mus musculus

<400> 115  
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acctgggtat catgacattg tcacaattcc tgctggagcc accaacattg aagtgaagaca 120  
tcggaatcaa aggggggtcca gaaacaatgg cagctttctg gctattagag ccgctgatgg 180  
tacctatatt ctgaatggaa acttcactct gtccacacta gagcaagacc tcacctacaa 240  
aggctactgtc ttaaggtaca gtggttcctc ggctgcgctg gagagaatcc gcagcttttag 300  
tcactcaaa gaacccttaa ccatccaggt tctt 334

<210> 116  
<211> 528  
<212> DNA  
<213> Mus musculus

<400> 116  
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atgaccatca tccaggaatt ctgtgatggt ggctgacgtg catttggaacc agggcttgga 120  
tgcatcgatg ctggtaagga ttgaagacat taaacgcttg tottctgtag taccgaagtt 180  
ctcttcacag aatttggaat cgtcatgaga aaggccaagt agatgcccac tttcatgagc 240  
cacagtgaag gctgcatgga ggccatcatc ttcaatcact gcacagctgc gctccggaga 300  
acatatggtc ccaacgtctg ccattcccag ggtgtcacat gaatgatgcc cacataaato 360

ctctcgggtg aacaggatgg ctgcatcgta gtgctcttcg tgatcatccc ctagctgggt 420  
atgttggtgc tgccatttgc aaaagttctt gagggtcgtg gccgcattct tgctcacctc 480  
cagactcgtg tccttgtccg tcagcaccac caccttcacc accgccag 528

<210> 117  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc feature  
<222> (389)  
<223> N is any nucleic acid

<220>  
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<222> (432)  
<223> N is any nucleic acid

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agcaattgtc aaaaaaagtt agaactatta caaccctgt ttcttggtac ttatcaaata 180  
cttagtatca tggggggttg gaaatgaaaa gtaggagaaa agtgagattt tactaagacc 240  
tgttttactt tacctcacta acaatggggg gagaaaggag taaaaatagg atctttgacc 300  
agcactgttt atgggctgct atgggtttca gaggaatgtt tatacattat ttctaccga 360  
ggatttaaaa cttcagattg ttccaaccng gaggggaagg gcttcgggcc aacgtggaat 420  
taaccggcaa tnggcctt 438

<210> 118  
<211> 455  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc feature  
<222> (452)  
<223> N is any nucleic acid

<400> 118  
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agcaattgtc aaaaaaagtt agaactatta caaccctgt ttcttggtac ttatcaaata 180  
cttagtatca tggggggttg gaaatgaaaa gtaggagaaa agtgagattt tactaagacc 240

tggttttactt tacctcacta acaatggggg gagaaaggag tacaaatagg atctttgacc 300  
 agcactgttt atggctgcta tggtttcaga gaatgtttat acattatttc taccgaggat 360  
 taaaacttcc agattgtttc aacatggaga ggaaaggctc aggcaacgtg gaaataacgc 420  
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<210> 119  
 <211> 380  
 <212> DNA  
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<220>  
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<220>  
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 <223> N is any nucleic acid

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 <223> N is any nucleic acid

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 <222> (295)  
 <223> N is any nucleic acid

<220>  
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 aagcaattgt caaaaaaagt tagaactatt acaaccctg tttcctggta cttatcaaat 180  
 acttagtatn atggggggtt ggaaatgaaa agtaggagaa aagtgagatt ttactaagac 240  
 ctgttttact ttacctcact aacaatgggg ggagaaagga gtacanatag gatctttgac 300  
 cagcactgtt tatggctgct atggtttcag aggaatgttt atacattatt totaccgaga 360  
 nttaaaactt cagattgttc 380

<210> 120  
 <211> 199  
 <212> DNA  
 <213> Mus musculus

119 380 120 199

<400> 120  
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ttcctcgggt ggcaggaaa gagtccgcag ctttagtcca ctcaaataac ccttaaccat 180  
ccaggttctt atggtagga 199

<210> 121  
<211> 439  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (198)  
<223> N is any nucleic acid

<220>  
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<222> (199)  
<223> N is any nucleic acid

<220>  
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<222> (203)  
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tattacaacc cctgtttcct ggtacttata aaatacttag tatcatgggg gttgggaaat 180  
gaaaagtagg aggaaagnng agnttttact aagacctgtt ttacctttac ctactaaca 240  
atgggggggag aaaggagtac aaataggatc tttgaccagc actgtttatg gctgctatgg 300  
tttcagagaa tgtttataca ttatttctac cgagaattaa aacttcagat tgttcaacat 360  
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<210> 122  
<211> 471  
<212> DNA  
<213> Homo sapiens

<400> 122  
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gcagtgatat agcataataa agccccgggc attattatta ttattatttc ttttgttaca 120  
tctattacaa gtttagaaaa aacaaagcaa ttgtcaaaaa aagttagaac tattacaacc 180

cctgtttcct ggtacttatac aaatacttag tatcatgggg gttgggaaat gaaaagtagg 240  
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aggagtacaa ataggatctt tgaccagcac tgtttatggc tgctatgggt tcagagaatg 360  
tttatacatt atttctaccc gagaattaaa acttcagatt ggttcaacat gagagaaagg 420  
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<210> 123  
<211> 424  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (39)  
<223> N is any nucleic acid

<220>  
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<223> N is any nucleic acid

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<222> (395)  
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gttagaacta ttacaacccc tgtttcctgg tacttatcaa atacttagta tcatgggggt 180  
tgggaaatga aaagtaggag aaaagtgaga ttttactaag acctgtttta ctttacctca 240  
ctaacaatgg ggggagaaaag gagtacaaat aggatctttg accagcactg tttatggctg 300  
ctaattggtt cagagaatgt ttatacatta tttctacccg agaattaaaa cttcagattg 360  
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tttg 424

<210> 124  
<211> 458  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Misc\_feature  
<222> (453)  
<223> N is any nucleic acid

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 taggagaaaa gtgagatttt actaagacct gttttacttt acctcactaa caatgggggg 180  
 agaaaggagt acaaatagga tctttgacca gcactgttta tggctgctat ggtttcagag 240  
 aatgtttata cattatttct accgagaatt aaaacttcag attgttcaac atgagagaaa 300  
 ggctcagcaa cgtgaaataa cgcaaagtc ttcctctttc cttttttgga ccacagccag 360  
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<210> 125  
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 <212> DNA  
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<220>

<221> CDS

<222> (466)..(3366)

<223>

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 gaggcgaag aggggcgcca ggcaccaatc tccgcgttgc ctcagccccg gaggcgcccc 180  
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 ctccgggagc ttcggctgta gccggctctg cgcgccttc caacgaataa tagaaattgt 360  
 taattttaac aatccagagc aggccaacga ggctttgctc tcccgaccgc aactaaagct 420  
 ccctcgctcc gtgcgctgct acgagcgggtg tctcctgggg ctcca atg cag cga gct 477  
 Met Gln Arg Ala  
 1  
 gtg ccc gag ggg ttc gga agg cgc aag ctg ggc agc gac atg ggg aac 525  
 Val Pro Glu Gly Phe Gly Arg Arg Lys Leu Gly Ser Asp Met Gly Asn  
 5 10 15 20  
 gcg gag cgg gct ccg ggg tct cgg agc ttt ggg ccc gta ccc acg ctg 573  
 Ala Glu Arg Ala Pro Gly Ser Arg Ser Phe Gly Pro Val Pro Thr Leu

25								30					35					
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Leu	Leu	Leu	Ala	Ala	Ala	Leu	Leu	Ala	Val	Ser	Asp	Ala	Leu	Gly	Arg			
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ccc	tcc	gag	gag	gac	gag	gag	cta	gtg	gtg	ccg	gag	ctg	gag	cgc	gtc	669		
Pro	Ser	Glu	Glu	Asp	Glu	Glu	Leu	Val	Val	Pro	Glu	Leu	Glu	Arg	Val			
		55					60					65						
ccg	gga	cac	ggg	acc	acg	cgc	ctc	cgc	ctg	cac	gcc	ttt	gac	cag	cag	717		
Pro	Gly	His	Gly	Thr	Thr	Arg	Leu	Arg	Leu	His	Ala	Phe	Asp	Gln	Gln			
	70					75					80							
ctg	gat	ctg	gac	gtg	ccg	ccc	gac	agc	agc	ttt	ttg	gcg	ccc	ggc	ttc	765		
Leu	Asp	Leu	Asp	Val	Pro	Pro	Asp	Ser	Ser	Phe	Leu	Ala	Pro	Gly	Phe			
85					90					95					100			
acg	ctc	cag	aac	gtg	ggg	cgc	aaa	tcc	ggg	tcc	gac	acc	ccg	ctt	ccg	813		
Thr	Leu	Gln	Asn	Val	Gly	Arg	Lys	Ser	Gly	Ser	Asp	Thr	Pro	Leu	Pro			
				105					110					115				
gaa	acc	gac	ctg	gcg	cac	tgc	ttc	tac	tcc	ggc	acc	gtg	aat	ggc	gat	861		
Glu	Thr	Asp	Leu	Ala	His	Cys	Phe	Tyr	Ser	Gly	Thr	Val	Asn	Gly	Asp			
			120					125					130					
ccc	agc	tcg	gct	gcc	gcc	ctc	agc	ctc	tgc	gag	ggc	gtg	cgc	ggc	gcc	909		
Pro	Ser	Ser	Ala	Ala	Ala	Leu	Ser	Leu	Cys	Glu	Gly	Val	Arg	Gly	Ala			
		135					140					145						
ttc	tac	ctg	ctg	ggg	gag	gcg	tat	ttc	atc	cag	ccg	ctg	ccc	gcc	gcc	957		
Phe	Tyr	Leu	Leu	Gly	Glu	Ala	Tyr	Phe	Ile	Gln	Pro	Leu	Pro	Ala	Ala			
	150					155					160							
agc	gag	cgc	ctc	gcc	acc	gcc	gcc	cca	ggg	gag	aag	ccg	ccg	gca	cca	1005		
Ser	Glu	Arg	Leu	Ala	Thr	Ala	Ala	Pro	Gly	Glu	Lys	Pro	Pro	Ala	Pro			
165					170				175						180			
cta	cag	ttc	cac	ctc	ctg	cgg	cgg	aat	cgg	cag	ggc	gac	gta	ggc	ggc	1053		
Leu	Gln	Phe	His	Leu	Leu	Arg	Arg	Asn	Arg	Gln	Gly	Asp	Val	Gly	Gly			
				185					190					195				
acg	tgc	ggg	gtc	gtg	gac	gac	gag	ccc	cgg	ccg	act	ggg	aaa	gcg	gag	1101		
Thr	Cys	Gly	Val	Val	Asp	Asp	Glu	Pro	Arg	Pro	Thr	Gly	Lys	Ala	Glu			
			200					205					210					
acc	gaa	gac	gag	gac	gaa	ggg	act	gag	ggc	gag	gac	gaa	ggg	cct	cag	1149		
Thr	Glu	Asp	Glu	Asp	Glu	Gly	Thr	Glu	Gly	Glu	Asp	Glu	Gly	Pro	Gln			
		215					220					225						
tgg	tcg	ccg	cag	gac	ccg	gca	ctg	caa	ggc	gta	gga	cag	ccc	aca	gga	1197		
Trp	Ser	Pro	Gln	Asp														



ggt cta aag cat tac ctt ctc acg ttg ttt tcg gtg gca gcc aga ttg	1341
Gly Leu Lys His Tyr Leu Leu Thr Leu Phe Ser Val Ala Ala Arg Leu	
280 285 290	
tac aaa cac ccc agc att cgt aat tca gtt agc ctg gtg gtg gtg aag	1389
Tyr Lys His Pro Ser Ile Arg Asn Ser Val Ser Leu Val Val Val Lys	
295 300 305	
atc ttg gtc atc cac gat gaa cag aag ggg ccc gaa gtg acc tcc aat	1437
Ile Leu Val Ile His Asp Glu Gln Lys Gly Pro Glu Val Thr Ser Asn	
310 315 320	
gct gcc ctc act ctg cgg aac ttt tgc aac tgg cag aag cag cac aac	1485
Ala Ala Leu Thr Leu Arg Asn Phe Cys Asn Trp Gln Lys Gln His Asn	
325 330 335 340	
cca ccc agt gac cgg gat gca gag cac tat gac aca gca att ctt ttc	1533
Pro Pro Ser Asp Arg Asp Ala Glu His Tyr Asp Thr Ala Ile Leu Phe	
345 350 355	
acc aga cag gac ttg tgt ggg tcc cag aca tgt gat act ctt ggg atg	1581
Thr Arg Gln Asp Leu Cys Gly Ser Gln Thr Cys Asp Thr Leu Gly Met	
360 365 370	
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Ala Asp Val Gly Thr Val Cys Asp Pro Ser Arg Ser Cys Ser Val Ile	
375 380 385	
gaa gat gat ggt tta caa gct gcc ttc acc aca gcc cat gaa tta ggc	1677
Glu Asp Asp Gly Leu Gln Ala Ala Phe Thr Thr Ala His Glu Leu Gly	
390 395 400	
cac gtg ttt aac atg cca cat gat gat gca aag cag tgt gcc agc ctt	1725
His Val Phe Asn Met Pro His Asp Asp Ala Lys Gln Cys Ala Ser Leu	
405 410 415 420	
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Asn Gly Val Asn Gln Asp Ser His Met Met Ala Ser Met Leu Ser Asn	
425 430 435	
ctg gac cac agc cag cct tgg tct cct tgc agt ggc tac atg att aca	1821
Leu Asp His Ser Gln Pro Trp Ser Pro Cys Ser Gly Tyr Met Ile Thr	
440 445 450	
tca ttt ctg gat aat ggt cat ggg gaa tgt ttg atg gac aag cct cag	1869
Ser Phe Leu Asp Asn Gly His Gly Glu Cys Leu Met Asp Lys Pro Gln	
455 460 465	
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Asn Pro Ile Gln Leu Pro Gly Asp Leu Pro Gly Thr Ser Tyr Asp Ala	
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Asn Arg Gln Cys Gln Phe Thr Phe Gly Glu Asp Ser Lys His Cys Pro	
485 490 495 500	
gat gca gcc agc aca tgt agc acc ttg tgg tgt acc ggc acc tct ggt	2013
Asp Ala Ala Ser Thr Cys Ser Thr Leu Trp Cys Thr Gly Thr Ser Gly	
505 510 515	
ggg gtg ctg gtg tgt caa acc aaa cac ttc ccg tgg gcg gat ggc acc	2061
Gly Val Leu Val Cys Gln Thr Lys His Phe Pro Trp Ala Asp Gly Thr	

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Ser	Cys	Gly	Glu	Gly	Lys	Trp	Cys	Ile	Asn	Gly	Lys	Cys	Val	Asn	Lys				
		535				540				545									
aac	cac	aga	aag	cat	ttt	gat	acg	cct	ttt	cat	gga	agc	tgg	gga	atg	2157			
Asn	His	Arg	Lys	His	Phe	Asp	Thr	Pro	Phe	His	Gly	Ser	Trp	Gly	Met				
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tgg	ggg	cct	tgg	gga	gac	tgt	tcg	aga	acg	tgc	ggg	gga	gga	gtc	cag	2205			
Trp	Gly	Pro	Trp	Gly	Asp	Cys	Ser	Arg	Thr	Cys	Gly	Gly	Gly	Val	Gln				
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tac	acg	atg	agg	gaa	tgt	gac	aac	cca	gtc	cca	aag	aat	gga	ggg	aag	2253			
Tyr	Thr	Met	Arg	Glu	Cys	Asp	Asn	Pro	Val	Pro	Lys	Asn	Gly	Gly	Lys				
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tac	tgt	gaa	ggc	aaa	cga	gtg	cgc	tac	aga	tcc	tgt	aac	ctt	gag	gac	2301			
Tyr	Cys	Glu	Gly	Lys	Arg	Val	Arg	Tyr	Arg	Ser	Cys	Asn	Leu	Glu	Asp				
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tgt	cca	gac	aat	aat	gga	aaa	acc	ttt	aga	gag	gaa	caa	tgt	gaa	gca	2349			
Cys	Pro	Asp	Asn	Asn	Gly	Lys	Thr	Phe	Arg	Glu	Glu	Gln	Cys	Glu	Ala				
		615				620						625							
cac	aac	gag	ttt	tca	aaa	gct	tcc	ttt	ggg	agt	ggg	cct	gcg	gtg	gaa	2397			
His	Asn	Glu	Phe	Ser	Lys	Ala	Ser	Phe	Gly	Ser	Gly	Pro	Ala	Val	Glu				
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tgg	att	ccc	aag	tac	gct	ggc	gtc	tca	cca	aag	gac	agg	tgc	aag	ctc	2445			
Trp	Ile	Pro	Lys	Tyr	Ala	Gly	Val	Ser	Pro	Lys	Asp	Arg	Cys	Lys	Leu				
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atc	tgc	caa	gcc	aaa	ggc	att	ggc	tac	ttc	ttc	gtt	ttg	cag	ccc	aag	2493			
Ile	Cys	Gln	Ala	Lys	Gly	Ile	Gly	Tyr	Phe	Phe	Val	Leu	Gln	Pro	Lys				
				665				670						675					
gtt	gta	gat	ggg	act	cca	tgt	agc	cca	gat	tcc	acc	tct	gtc	tgt	gtg	2541			
Val	Val	Asp	Gly	Thr	Pro	Cys	Ser	Pro	Asp	Ser	Thr	Ser	Val	Cys	Val				
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caa	gga	cag	tgt	gta	aaa	gct	ggg	tgt	gat	cgc	atc	ata	gac	tcc	aaa	2589			
Gln	Gly	Gln	Cys	Val	Lys	Ala	Gly	Cys	Asp	Arg	Ile	Ile	Asp	Ser	Lys				
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aag	aag	ttt	gat	aaa	tgt	ggg	gtt	tgc	ggg	gga	aat	gga	tct	act	tgt	2637			
Lys	Lys	Phe	Asp	Lys	Cys	Gly	Val	Cys	Gly	Gly	Asn	Gly	Ser	Thr	Cys				
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aaa	aaa	ata	tca	gga	tca	gtt	act	agt	gca	aaa	cct	gga	tat	cat					

gct gat ggc aca tat att ctt aat ggt gac tac act ttg tcc acc tta Ala Asp Gly Thr Tyr Ile Leu Asn Gly Asp Tyr Thr Leu Ser Thr Leu 775 780 785	2829
gag caa gac att atg tac aaa ggt gtt gtc ttg agg tac agc ggc tcc Glu Gln Asp Ile Met Tyr Lys Gly Val Val Leu Arg Tyr Ser Gly Ser 790 795 800	2877
tct gcg gca ttg gaa aga att cgc agc ttt agc cct ctc aaa gag ccc Ser Ala Ala Leu Glu Arg Ile Arg Ser Phe Ser Pro Leu Lys Glu Pro 805 810 815 820	2925
ttg acc atc cag gtt ctt act gtg ggc aat gcc ctt cga cct aaa att Leu Thr Ile Gln Val Leu Thr Val Gly Asn Ala Leu Arg Pro Lys Ile 825 830 835	2973
aaa tac acc tac ttc gta aag aag aag aag gaa tct ttc aat gct atc Lys Tyr Thr Tyr Phe Val Lys Lys Lys Lys Glu Ser Phe Asn Ala Ile 840 845 850	3021
ccc act ttt tca gca tgg gtc att gaa gag tgg ggc gaa tgt tct aag Pro Thr Phe Ser Ala Trp Val Ile Glu Glu Trp Gly Glu Cys Ser Lys 855 860 865	3069
tca tgt gaa ttg ggt tgg cag aga aga ctg gta gaa tgc cga gac att Ser Cys Glu Leu Gly Trp Gln Arg Arg Leu Val Glu Cys Arg Asp Ile 870 875 880	3117
aat gga cag cct gct tcc gag tgt gca aag gaa gtg aag cca gcc agc Asn Gly Gln Pro Ala Ser Glu Cys Ala Lys Glu Val Lys Pro Ala Ser 885 890 895 900	3165
acc aga cct tgt gca gac cat ccc tgc ccc cag tgg cag ctg ggg gag Thr Arg Pro Cys Ala Asp His Pro Cys Pro Gln Trp Gln Leu Gly Glu 905 910 915	3213
tgg tca tca tgt tct aag acc tgt ggg aag ggt tac aaa aaa aca agc Trp Ser Ser Cys Ser Lys Thr Cys Gly Lys Gly Tyr Lys Lys Thr Ser 920 925 930	3261
ttg aag tgt ctg tcc cat gat gga ggg gtg tta tct cat gac agc tgt Leu Lys Cys Leu Ser His Asp Gly Gly Val Leu Ser His Asp Ser Cys 935 940 945	3309
gat cct tta aag aaa cct aaa cat ttc ata gac ttt tgc aca atg gca Asp Pro Leu Lys Lys Pro Lys His Phe Ile Asp Phe Cys Thr Met Ala 950 955 960	3357
gaa tgc agt taagtggttt aagtgggtgtt agctttgagg gcaaggcaaa Glu Cys Ser 965	3406
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Asp Met Gly Asn Ala Glu Arg Ala Pro Gly Ser Arg Ser Phe Gly Pro  
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Val Pro Thr Leu Leu Leu Leu Ala Ala Ala Leu Leu Ala Val Ser Asp  
35 40 45

Ala Leu Gly Arg Pro Ser Glu Glu Asp Glu Glu Leu Val Val Pro Glu  
50 55 60

Leu Glu Arg Val Pro Gly His Gly Thr Thr Arg Leu Arg Leu His Ala  
65 70 75 80

Phe Asp Gln Gln Leu Asp Leu Asp Val Pro Pro Asp Ser Ser Phe Leu  
85 90 95

Ala Pro Gly Phe Thr Leu Gln Asn Val Gly Arg Lys Ser Gly Ser Asp  
100 105 110

Thr Pro Leu Pro Glu Thr Asp Leu Ala His Cys Phe Tyr Ser Gly Thr  
115 120 125

Val Asn Gly Asp Pro Ser Ser Ala Ala Ala Leu Ser Leu Cys Glu Gly  
130 135 140

Val	Arg	Gly	Ala	Phe	Tyr	Leu	Leu	Gly	Glu	Ala	Tyr	Phe	Ile	Gln	Pro
145					150					155					160

Leu Pro Ala Ala Ser Glu Arg Leu Ala Thr Ala Ala Pro Gly Glu Lys

175

His Glu Leu Gly His Val Phe Asn Met Pro His Asp Asp Ala Lys Gln  
405 410 415

Cys Ala Ser Leu Asn Gly Val Asn Gln Asp Ser His Met Met Ala Ser  
420 425 430

Met Leu Ser Asn Leu Asp His Ser Gln Pro Trp Ser Pro Cys Ser Gly  
435 440 445

Tyr Met Ile Thr Ser Phe Leu Asp Asn Gly His Gly Glu Cys Leu Met  
450 455 460

Asp Lys Pro Gln Asn Pro Ile Gln Leu Pro Gly Asp Leu Pro Gly Thr  
465 470 475 480

Ser Tyr Asp Ala Asn Arg Gln Cys Gln Phe Thr Phe Gly Glu Asp Ser  
485 490 495

Lys His Cys Pro Asp Ala Ala Ser Thr Cys Ser Thr Leu Trp Cys Thr  
500 505 510

Gly Thr Ser Gly Gly Val Leu Val Cys Gln Thr Lys His Phe Pro Trp  
515 520 525

Ala Asp Gly Thr Ser Cys Gly Glu Gly Lys Trp Cys Ile Asn Gly Lys  
530 535 540

Cys Val Asn Lys Asn His Arg Lys His Phe Asp Thr Pro Phe His Gly  
545 550 555 560

Ser Trp Gly Met Trp Gly Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly  
565 570 575

Gly Gly Val Gln Tyr Thr Met Arg Glu Cys Asp Asn Pro Val Pro Lys  
580 585 590

Asn Gly Gly Lys Tyr Cys Glu Gly Lys Arg Val Arg Tyr Arg Ser Cys  
595 600 605

Asn Leu Glu Asp Cys Pro Asp Asn Asn Gly Lys Thr Phe Arg Glu Glu  
610 615 620

Gln Cys Glu Ala His Asn Glu Phe Ser Lys Ala Ser Phe Gly Ser Gly  
625 630 635 640

Pro Ala Val Glu Trp Ile Pro Lys Tyr Ala Gly Val Ser Pro Lys Asp  
645 650 655

Arg Cys Lys Leu Ile Cys Gln Ala Lys Gly Ile Gly Tyr Phe Phe Val  
660 665 670

Gln Leu Gly Glu Trp Ser Ser Cys Ser Lys Thr Cys Gly Lys Gly Tyr

915

920

925

Lys Lys Thr Ser Leu Lys Cys Leu Ser His Asp Gly Gly Val Leu Ser  
930 935 940

His Asp Ser Cys Asp Pro Leu Lys Lys Pro Lys His Phe Ile Asp Phe  
945 950 955 960

Cys Thr Met Ala Glu Cys Ser  
965

2595550